

ABSTRACT OF THE DISCLOSURE

A 10GBASE-T transceiver that is capable of performing cable diagnostics. The transceiver is a physical layer device (PHY) that has four transceiver sections. Each section includes an input path and an output path. The input path generally includes a receiver, an analog-to-digital converter, a far end cross talk/near end cross talk canceller section, an alien noise canceller section, and an equalizer section. The output path includes a coding and preconditioning section, a digital-to-analog converter, and a transmitter. A substantial savings can be realized by utilizing the same elements that perform data communication to perform cable diagnostics. The diagnostics might occur before a link is formed or after a link is formed and may be based on test signals only or on data signals or communications. A first PHY might perform diagnostics alone or in combination with a second PHY which is in communication with the first as a link partner.